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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,677	02/28/2006	Peter John Bisiules	90959US	8431

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EXAMINER	
DINH, TRINH VO	

ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
06/01/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,677	BISIULES ET AL.	
	Examiner	Art Unit	
	Trinh Vo Dinh	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a response to amendment filed 03/04/2009. Amended claims 1-20 are pending. In view of the amendment, the objections of the drawing and claim 5 have been withdrawn. However, Applicant's arguments with respect to amended claims 1-20 are not deemed to be persuasive. Therefore, the rejections of claims 1-20 based on Snow retained and repeated for the following reasons.

Claim Rejections - 35 USC § 112

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recited "A folded dipole having an axis of propagation comprising a dipole axis and a pair of arms". It is unclear if "a dipole axis" and "a pair of arms" belong to "an axis of propagation" or "a folded dipole". If they belong to "an axis of propagation", it is unclear how non-physical "an axis of propagation" can comprise structure element of a pair of arms.

In claim 16, it is unclear what "view in plan" means.

Claims 17-20 are rejected because of their dependencies.

Claim Rejections - 35 USC § 102

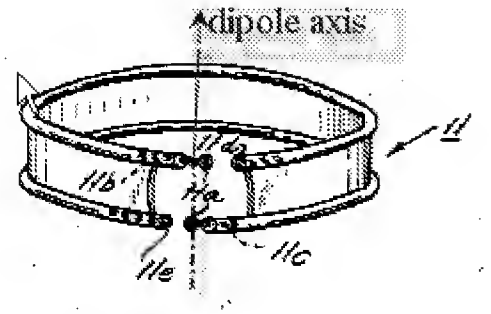
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Snow (US 4,115,778 of record).

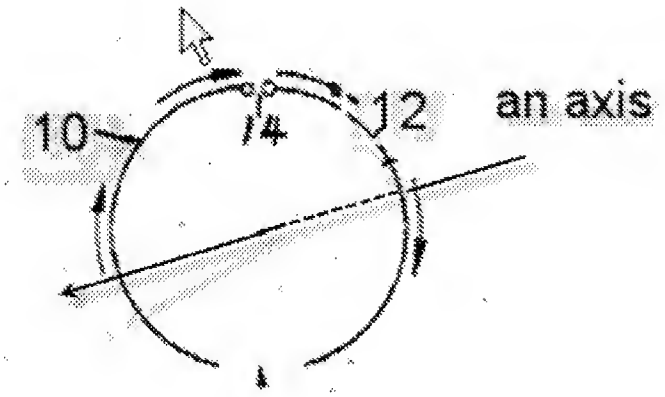
Respecting claim 1, Snow discloses, in Figs 2-3, a folded dipole (11) having a dipole axis and a pair of arms (inner arm 11b, outer arm 11c) which together have a profile which is concave on one side and convex on the other when viewed along the dipole axis. Note that "an axis of propagation" is appeared in a preamble which is denied the effect of a limitation where the claim following the preamble is a self contained description of the structure not depending for completeness upon the introductory clause. In other words, the recitation "an axis of propagation" can not rely upon to overcome the cited art of record which meets the claimed subject matters since the recitation is appeared in the preamble.



Respecting claims 2-4 and 9, Snow discloses the arms are at least partially curved, the arms have curved portions which have a substantially constant radius of curvature, and the arms are at least partially curved in a plane substantially orthogonal to the dipole axis. Snow further discloses an input section (11a, 11d) coupled to a concave side of the pair of arms.

4. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Dienes (US 3,771,162 of record).

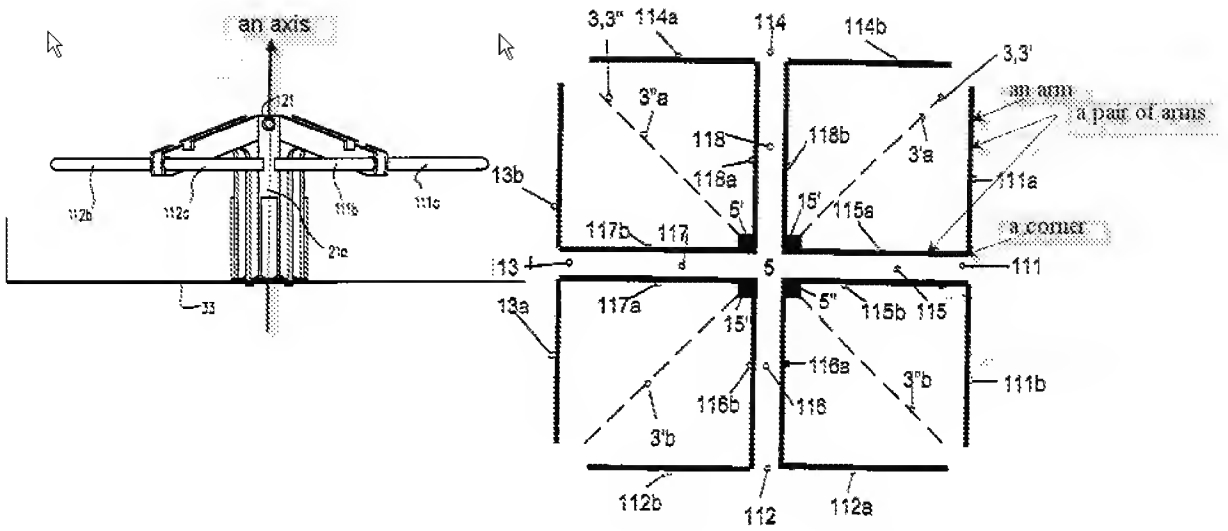
Respecting claim 1, Dienes discloses, in Fig. 1, a folded dipole having a dipole axis (as shown in the below drawing) and a pair of arms (10 +12) which together have a profile which is concave on one side and convex on the other when viewed along the dipole axis. Claim 1 further recites "an axis of propagation" which has been discussed in paragraph 3 above.



Respecting claims 2-4 and 9, Dienes discloses the arms are at least partially curved, the arms have curved portions which have a substantially constant radius of curvature, and the arms are at least partially curved in a plane substantially orthogonal to the dipole axis. Dienes further discloses an input section (14) coupled to a concave side of the pair of arms.

5. Claims 1, 5-7 and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gabriel et al (US 6,313,809 of record).

Respecting claim 1, Gabriel discloses, in Figs 2 and 5, a folded dipole (111) having a dipole axis and a pair of arms (one of 111a, 111b, 112a, 112b, 113a,113b as shown in the below drawing) which together have a profile which is concave on one side and convex on the other when viewed along the dipole axis. Claim 1 further recites "an axis of propagation" which has been discussed in paragraph 3 above.



Respecting claims 5-7 and 9-11, Gabriel discloses, in Figs. 2, 5, the pair of arms meets at a corner that subtends an angle lying in the range of 80° to 100°, each arm is substantially straight. Gabriel further discloses an input section (15', 5', 5", and 15") coupled to a concave side of the pair of arms, the pair of arms and both arms are inherently formed of sheet material and from the same sheet.

Respecting claims 12-13, Gabriel discloses, in Fig. 3, a first feed leg (15') coupled to one of the arms (111a) and a second feed leg (5") coupled to the other arm (111b), and a ground plane (33 in Fig. 3), and a folded dipole (111 in Fig. 2) with its dipole axis directed away from the ground plane.

Respecting claims 14-15, the use of the antenna in a base station which is in a communication system is merely an intended use.

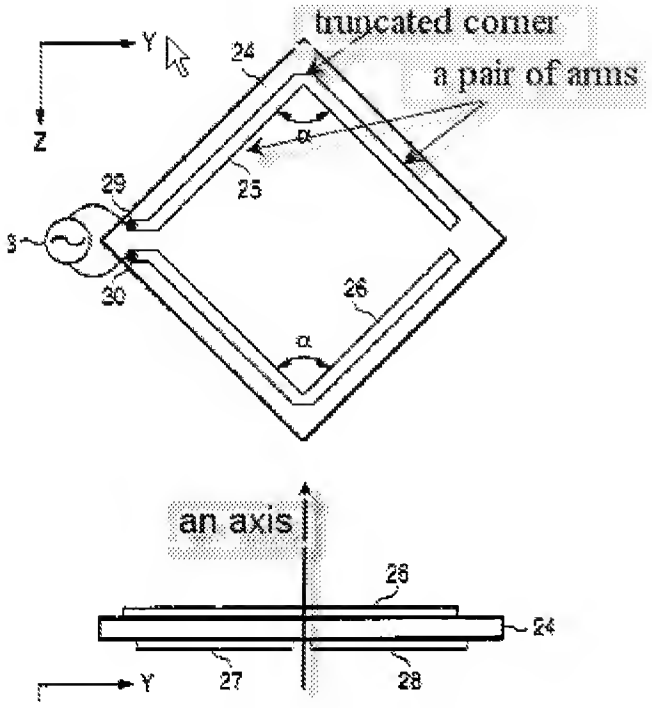
Respecting claims 16-19, Gabriel discloses, in Fig. 2, a dipole box comprising two or more folded dipoles (111a+111b, 112a+112b) arranged around a central region, each folded dipole having a dipole axis and a pair of arms (111a, 111b) which together have a profile which is concave on one side and convex on the other when the dipole box is viewed in plan.

Furthermore, Gabriel discloses four or more folded dipoles (111a+111b, 112a+112b, 113a+113b, 114a+114b) arranged around the central region, the dipoles are arranged as orthogonally opposed pairs.

Claim 20 further recites "each pair of dipoles is oriented to radiate at about +/-45° polarization with respect to vertical". Gabriel discloses the same structural configuration as the claimed invention. Therefore, although not explicitly stated in Gabriel, it is inherently that the dipole pair of Gabriel would perform a function of radiating at about +/-45° polarization with respect to vertical" as claimed.

6. Claims 1, 5-1 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al (US 6,573,874 of record).

Respecting claim 1, Saito discloses, in Fig. 8, a folded dipole having a dipole axis and a pair of arms (as shown in the below drawing) which together have a profile which is concave on one side and convex on the other when viewed along the dipole axis. Claim 1 further recites "an axis of propagation" which has been discussed in paragraph 3 above.



Respecting claims 5-11, Saito discloses the pair of arms meet at a corner that subtends an angle lying in the range of 80° to 100°, each arm is substantially straight, and the corner being truncated. Saito further discloses an input section (29, 30, 33) coupled to a concave side of the pair of arms, the pair of arms and both arms are inherently formed of sheet material and from the same sheet.

Respecting claims 16-19, Saito discloses, in Fig. 9, a dipole box comprising two or more folded dipoles (35+36, 37+38) arranged around a central region, each folded dipole having a dipole axis and a pair of arms (35 and 36, or 37 and 38) which together have a profile which is concave on one side and convex on the other when viewed in plan perpendicular to the central region, each pair of arms has a curved portion with a centre of curvature which is located in the central region. Furthermore, Saito discloses four or more folded dipoles (35+36, 37+38, 39+40,

41+42) arranged around the central region, the dipoles are arranged as orthogonally opposed pairs.

Claim 20 further recites "each pair of dipoles is oriented to radiate at about +/-45° polarization with respect to vertical". Saito discloses the same structural configuration as the claimed invention. Therefore, although not explicitly stated in Satio, it is inherently that the dipole pair of Saito would perform a function of radiating at about +/-45° polarization with respect to vertical" as claimed.

Response to the arguments

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "**A folded dipole is a particular type of dipole including two or more parallel, closely spaced dipoles connected together at their ends with one of the dipoles fed at its center and the others short circuited at their centers**", and "**radiating section includes a fed dipole, fed at its center, and a passive dipole, shorted at its center, the dipoles being separated by a gap. The fed and passive dipoles are connected at their ends**") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The cited art teach every features of the claimed invention; Therefore, the 102 rejections are proper and retained.

8. With respect to the rejections of dependent claims, which employing the additional teaching of the cited art. Applicant has not offer any specific argument thereagainst.

Accordingly, no further comments concerning the rejections of the dependent claims are necessary.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821. The examiner can normally be reached on Monday to Friday from 9:30AM to 6:00PM.The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 28, 2009

/Trinh Vo Dinh/
Primary Examiner, Art Unit 2821